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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/035,757 | 12/31/2001 | Patrick L. Ferguson | P01-3861 | 3750 |

7590 06/21/2004

INTELLECTUAL PROPERTY ADMINISTRATION
LEGAL DEPARTMENT, M/S 35
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| EXAMINER |
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DANG, KHANH NMN

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2111

DATE MAILED: 06/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/035,757

Applicant(s)

FERGUSON ET AL.

Examiner

Khanh Dang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2004-06-10
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "second connector" (claims 1 and 8) must be shown, and the steps set forth in claims 17-19 must be shown in the form of a flow chart, or the features canceled from the claims. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

Claim 4, and 8-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 4, it is unclear what the phrase "or above type cables" may refer to.

In claim 7, before "AGP", the word "or" should be changed to – and--.

In claim 8, line 10, "second" should be changed to – first --; in line 11, "add in card" should be changed to "extension transmitter card" to be consistent with the same term recited in line 15; in line 12, before "disposed," the word "first" should be changed to – second--; in line 12, after "from the," the word "second" should be changed to – first --; in line 13, "add in card" should be changed to "extension transmitter card" to be

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consistent with the same term recited in line 15; and in line 16, "second" should be changed to -- first --.

In claim 9, line 1, "second" should be changed to -- first --; and in line 2, "add-in card" should be changed to -- extension transmitter card --.

In claim 10, line 2, "first" should be changed to -- second --. Also, the phrase "audio communications ... transmitter card" is unclear and cannot be ascertained.

In claim 11, the phrase "power control communications ... extension transmitter card" is unclear and cannot be ascertained.

In claim 12, the phrase "analog video ... extension transmitter card" is unclear and cannot be ascertained.

In claim 13, the phrase "digital video ... extension transmitter card" is unclear and cannot be ascertained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4, 5, and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Thornton.

At the outset, it is noted that similar claims will be grouped together to avoid repetition in explanation.

As broadly drafted, these claims do not define any structure that differs from Thornton.

With regard to claim 1, Thornton discloses a computer interface extension configuration comprising: a host (host 106A, for example) having a motherboard (main circuit board of host or blade) with a first connector (it is inherent that the main circuit board of the host must include connector(s) allowing the local extender, for example, to communicate to the main circuit board) that allows motherboard signals to be shared internal to the host (106A), the motherboard also having at least a second connector (it is inherent that the main circuit board must include PCI connector(s) for communication with the host via PCI bus) separate from the first connector that supports communications with the host; an extension transmitter card (local extender 1710, for example) disposed within the host and being electrically coupled to the motherboard of the host via at least the first connector, the extension transmitter card having an extension controller (host controller 830A, for example); and an extension receiver (remote peripheral extender 1720) coupled to a plurality of user interface devices (monitor, keyboard, mouse, etc.), the extension receiver being extensibly connected to the extension transmitter card ((local extender 1710) and that at least receives data transmissions from the extension transmitter card ((local extender 1710) of the host

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(106A) to thereby provide the data transmissions to one or more of the plurality of user interface devices (monitor, keyboard, mouse, etc.).

With regard to claim 4, the extension receiver is extensibly connected to the extension transmitter via a cable compatible with any version of category five. See at least the abstract.

With regard to claim 5, it is clear that the plurality of user interface devices comprise a USB interface.

With regard to claim 7, the extension transmitter card (1710) disposed within the host (108A) is electrically coupled to the second connector of the motherboard of the host via one of a PCI, PCI-X, or AGP interface with the extension transmitter card. See at least column 16, lines 38-61.

With regard to claim 17, it is clear that one using the apparatus of Thornton would have performed the same steps set forth in claim 17. Note that, add-in card such as the extension card in a PCI slot must always be enumerated to be in full compliance with PCI protocol. See Cepulis, cited under relevant art, for example.

With regard to claim 18, it is clear that Thornton discloses graphic communications, since video signals must at least be supplied for the remote monitor of Thornton via the remote extender.

With regard to claim 19, it is clear that signals are transmitted serially from the extension card.

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Claims 1, 3, and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Thomas et al.

At the outset, it is noted that similar claims will be grouped together to avoid repetition in explanation.

As broadly drafted, these claims do not define any structure that differs from Thomas et al. (Thomas).

With regard to claim 1, Thomas discloses a computer interface extension configuration (shown generally at Fig. 3) comprising: a host (KVM 2) having a motherboard (it is clear that KVM 2 must have a main circuit board so that components can be mounted thereon) with a first connector (not labeled, for the extender or transmitter/receiver 18's connection to the main circuit board of KVM 2) that allows motherboard signals to be shared internal to the host, the motherboard also having at least a second connector (not labeled, allowing PC 13 to be connected to the main circuit board of KVM 2) separate from the first connector that supports communications with the host; an extension transmitter card (it is clear that extender or transmitter/receiver 18 is must be in the form of an IC card) disposed within the host and being electrically coupled to the motherboard (main circuit board, not labeled, of KVM 2) of the host via at least the first connector, the extension transmitter card having an extension controller (17); and an extension receiver (extender or transmitter/receiver 11) coupled to a plurality of user interface devices (7, for example), the extension receiver being extensibly connected to the extension transmitter card and that at least

receives data transmissions from the extension transmitter card of the host to thereby provide the data transmissions to one or more of the plurality of user interface devices.

With regard to claim 3, the extension receiver is extensibly connected to the extension transmitter via a fiber optic cable (see column 2, lines 1-13).

With regard to claim 4, the extension receiver is extensibly connected to the extension transmitter via a cable compatible with any version of category five or above type cables (see column 2, lines 1-13).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thornton.

Thornton, as discussed above, discloses the claimed invention including the use of keyboard, mouse, monitor, a serial link, and a USB link. Further, it is also inherent that the computer of Thornton must include a power button. Thornton does not disclose the use of a computer speaker and a microphone connected to the computer system. However, the use of speaker and microphone in a computer system is old and well-known as evidenced by Kejser et al. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use speaker and microphone in a computer system of Thornton et al., since the Examiner takes Official Notice that the

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use of speaker and microphone for the purpose providing multimedia contents to a computer system is old and well-known, and providing the computer system of Thornton with a speaker and microphone only involves ordinary skill in the art.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thornton.

Thornton, as discussed above, discloses the claimed invention including the use of a cable. Thornton does not disclose the use of a fiber optics cable. However, the use of fiber optics cable is old and well-known as evidenced by Thomas et al. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use fiber optics cable in Thornton et al., since the Examiner takes Official Notice that the use of fiber optics cable for the purpose providing faster speed to data transmission is old and well-known, and using fiber optics cable in Thornton only involves ordinary skill in the art.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thornton.

Thornton, as discussed above, discloses the claimed invention including the use of an extension card connected to a motherboard. Thornton does not disclose the use of a ribbon cable for connection between the mother board and the card. However, the use of ribbon cable is old and well-known as evidenced by Ikeda or Hartfield et al. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use ribbon cable in Thornton et al., since the Examiner takes Official Notice that the use of ribbon cable for the purpose of saving space, for example, is old and well-known, and

using such ribbon cable in Thornton for connecting the card to the motherboard only involves ordinary skill in the art.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thornton.

Thornton discloses the claimed invention including the use an extension card connected to a motherboard (see detailed discussion regarding to claim 1). With regard to claim 9, see at least column 16, lines 38-61. With regard to claim 11, it is inherent that power control must be provided, since the power for the host must always be regulated and power for the receiver must be supplied. With regard to claims 12 and 13, it is clear that either analog or digital video communications must at least be supplied for the remote monitor of Thornton via the remote extender. With regard to claims 14 and 15, it is clear that since video signal from the PCI extension card must be supplied to the remote monitor via the remote extender, the PCI extension card must include a graphic controller. Thornton does not disclose the use of an internal cable for connection between the motherboard and the card. However, the use of an internal cable is old and well-know as evidenced by Ikeda or Hartfield et al. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use ribbon cable in Thornton et al., since the Examiner takes Official Notice that the use of a internal cable for the purpose of saving space, for example, is old and well-known, and using such an internal cable in Thornton for connecting the card to the motherboard only involves ordinary skill in the art.

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Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thornton, as applied to claim 8 above, and further in view of the following.

Thornton, as discussed above, discloses the claimed invention including the use of a plurality of user interfaces. Thornton does not disclose the use of a computer speaker so that audio communications can be supplied for the remote computer system of Thornton via the remote extender. However, the use of speaker in a computer system is old and well-known as evidenced by Kejser et al. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use speaker in a computer system of Thornton et al., since the Examiner takes Official Notice that the use of speaker for the purpose providing multimedia contents to a computer system is old and well-known, and providing the computer system of Thornton with a speaker and microphone only involves ordinary skill in the art.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thornton, as applied to claim 14 above, and further in view of the following.

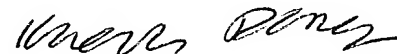
Thornton, as discussed above, discloses the claimed invention including the use of a graphic controller since video communications must at least be supplied for the remote monitor of Thornton via the remote extender. Thornton does not disclose that the graphic controller is AGP compatible. However, the use of ribbon cable is old and well-known as evidenced by commercial PCI based video card and AGP based video card. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use AGP protocol in Thornton et al., since the Examiner takes Official Notice

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that the use of AGP for the purpose of providing higher bandwidth and resolution to the video signal, for example, is old and well-known, and using AGP in only involves ordinary skill in the art.

U.S. Patent Nos. 6,397,268 to Cepulis, 6,320,756 to Ikeda, 6,571,305 to Engler, 6,672,896 to Li, 6,381,666 to Kejser et al., 5,967,796 to Hartfield et al., and US2004/0033734 to Lelong et al. are cited as relevant art.

Any inquiry concerning this communication should be directed to Khanh Dang at telephone number 703-308-0211.



Khanh Dang
Primary Examiner